

the user interface. In many embodiments, the user interface is displayed on a display of one of the CE devices. In many implementations, the CE device upon which the user interface is displayed does not have to be the group controller.

[0075] The information provided and/or accessible through the user interface and/or format of the user interface may vary depending on the capabilities of the CE device and/or the display of the CE device. For example, in some implementations, the user interface may be merely textual data with one or more lines of text being displayed. The user typically can scroll through multiple lines of text to make relevant selections (e.g., selecting between ON or “OFF,” designating whether a coupling is “ACCEPTED” or “DECLINED,” selecting one of multiple antenna system identifiers and/or CE device identifiers, etc.). Similarly, some embodiments may display one or more tables as at least part of the user interface.

[0076] In other implementations, more information may be displayed and/or more options may be available when the CE device and/or the display is capable. Some embodiments provide a graphical user interface, and the information displayed is typically dependent on the wireless coupling parameters and/or the coupling configurations. Further, the user interface may display communicational relationships and/or positional relationships between one or more of the antenna systems. In some embodiments, the coupling parameters may include each antenna system identifying which other antenna systems it detects. Information can be generated, such as mapping that provides communicational and/or positional relationships between antenna systems. The user interface may display a representation of positioning of CE devices and/or antenna systems. Further, the user interface may additionally display parameters associated with related antenna systems or CE devices (e.g., identify communication protocols available between two antenna systems, signal strengths, power levels, power transfer capabilities, numbers of communications antennas, etc.).

[0077] In some implementations, the user interface may present in part a pictorial representation of one or more antenna systems and/or CE devices. Similarly, the user may be able to drag and drop icons and/or pictorial representations to designate couplings and/or graphically draw lines between antenna systems and/or CE devices. For example, some embodiments generate and display a graphical user interface based at least in part on the wireless coupling parameters. Further, the graphical user interface may, in some embodiments, show a pictorial representation of communicational and/or positional relationships between each of the plurality of antenna systems. The user interface can be configured to allow a user to interact with the graphical user interface to obtain information, define parameters, specify some or all of the coupling configurations, and the like. For example, modifying instructions may be received through the graphical user interface instructing that one or more of the determined wireless coupling configurations be modified. Based on the modifying instructions, one or more modified coupling configurations can be generated in accordance with the received modifying instructions, with the one or more modified coupling configurations being configured to modify how at least two of the plurality of antenna systems are to communicate with each other. These modified coupling configurations can be communicated to the relevant antenna systems (e.g., the at least two of the plurality of antenna systems).

[0078] Additional information may be displayed in the user interface and/or optionally a user can activate one or more options (e.g., drop down window, menu, or the like) that cause further information to be displayed (e.g., number of communications antennas; communication protocols being used, available, and/or associated with each antenna; which one or more communications antennas of a first antenna system are coupled with which one or more communications antenna systems of one or more other antenna systems; whether power transfer is activated; whether power transfer is actively occurring; etc.).

[0079] FIG. 9 shows an example GUI 910 which can be displayed by one of CE devices (e.g., by a group owner) or another computing device configured to configure wireless power or data communication between CE devices. GUI 910 may display a “map” of identified or determined CE devices as icons 915a-915d. GUI 910 further shows connections 920 between CE devices (displayed as icons 915a-915d) characterizing both wireless power and wireless data transfer. GUI 910 can include control elements, such as simulated soft buttons or menu elements, to establish, manipulate, adjust, or remove one or more connections 920 to establish, manipulate, adjust, or remove wireless power and/or wireless data transfer between selected CE devices. For example, the user can authorize wireless power transfer between certain CE devices (displayed as icons 915a-915d) and can prohibit wireless power transfer between some other CE devices. Moreover, the user can authorize wireless data transfer between certain CE devices (displayed as icons 915a-915d) and can prohibit wireless data transfer between some other CE devices. In addition, GUI 910 can include control elements to control protocols or wireless power and/or data transfer parameters (e.g., to control data limits, limits of power charge levels, time to turn on and time to turn off, etc.). When a new CE device is discovered, identified, or determined, GUI 910 can display a new icon similar to icons 915a-915d to show the newly discovered CE device. Further, the user can use GUI 910 to establish wireless power or data transfer.

[0080] FIG. 10 shows another process flow diagram of a method 1000 for configuring wireless power and data transfer between CE devices, in accordance with some embodiments. Method 1000 may be performed by processing logic that may comprise hardware (e.g., decision-making logic, dedicated logic, programmable logic, ASIC, and micro-code), software (such as software run on a general-purpose computer system or a dedicated machine), or a combination of both. In one example embodiment, the processing logic refers to a group owner, controller 318, a processor of CE device, a computing device, or a server. Notably, below recited steps of method 1000 may be implemented in an order different than described and shown in the figure. Moreover, method 1000 may have additional steps not shown herein, but which can be evident for those skilled in the art from the present disclosure. Method 1000 may also have fewer steps than outlined below and shown in FIG. 10.

[0081] Method 1000 commences at step 1010 when a plurality of antenna systems is identified. The plurality of antenna systems can include at least first antenna system 116 and second antenna system 116. At least the first antenna system 116 is cooperated with a first CE device (e.g., one of CE devices 130-134) and the second antenna system is cooperated with a separate second CE device (e.g., one of CE devices 130-134). As discussed above, each of the